

DEB/CAE/kmb

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CLAIMS AS AMENDED 27 FEBRUARY 2001

4. A method for preserving a living organ, comprising incubating the organ in a solution of S-nitrosated hemoglobin and low molecular weight thiol.
16. (Amended) A method for delivering NO in a mammal, comprising administering to the mammal an effective amount of a blood substitute comprising S-nitrosohemoglobin.
17. The method of Claim 16, in which the blood substitute comprises S-nitrosohemoglobin and low molecular weight S-nitrosothiol.
18. (Amended) A method for scavenging oxygen free radicals and NO<sup>-</sup> in a mammal, comprising administering to the mammal an effective amount of a blood substitute comprising S-nitrosohemoglobin.
19. (Amended) A method for reducing blood pressure in a mammal, comprising administering an effective amount of SNO-Hb to the mammal.
20. (Twice Amended) A method for treating a disease in a mammal, comprising administering an effective amount of SNO-Hb to the mammal, wherein the disease is selected from the group consisting of heart disease, vascular disease, atherosclerosis, lung disease and inflammation.

21. (Twice Amended) A method for treating a medical condition in a mammal, comprising administering an effective amount of SNO-Hb to the mammal, wherein the medical condition is selected from the group consisting of stroke, angina and acute respiratory distress.
22. (Amended) A method for enhancing the preservation of an excised organ, comprising storing the organ in a solution comprising an effective amount of SNO-Hb(FeII)O<sub>2</sub>.
23. (Amended) A method for treating a human with sickle cell anemia comprising administering to the human an effective amount of a preparation comprising SNO-Hb(FeII)O<sub>2</sub>.
24. The method of Claim 23 in which the preparation comprises SNO-Hb(FeII)O<sub>2</sub> and a thiol.
25. The method of Claim 23 in which the preparation comprises SNO-Hb(FeII)O<sub>2</sub> and an S-nitrosothiol.
26. A method for treating a patient having a disease or medical condition characterized by abnormalities of nitric oxide and oxygen metabolism, comprising administering to the patient an effective amount of a preparation comprising SNO-Hb.
27. (Amended) The method of Claim 26 in which the disease or medical condition is selected from the group consisting of: heart disease, lung disease, sickle-cell anemia, stroke and organ transplantation.
28. A method for treating acute respiratory distress in a mammal, comprising administering to the mammal an effective amount of SNO-Hb[FeII] or SNO-Hb[FeIII].

29. A method for causing vasodilation in a mammal, comprising administering to the mammal SNO-Hb(FeII).
30. A method for regulating delivery of oxygen and NO, in various redox forms, in a mammal, comprising administering to the mammal an effective amount of a preparation comprising a low molecular weight thiol or nitrosothiol and S-nitrosohemoglobin.
33. A method for preparing a composition comprising SNO-Hb[FeII]O<sub>2</sub>, said method comprising incubating excess S-nitrosocysteine, S-nitrosohomocysteine, S-nitrosocysteinylglycine, or S-nitrosoglutathione with purified hemoglobin in the presence of oxygen at a pH of about 7.4 to about 9.2.
34. A method for preparing a composition comprising SNO-Hb[FeII], said method comprising incubating excess S-nitrosocysteine, S-nitrosohomocysteine, S-nitrosocysteinylglycine, or S-nitrosoglutathione with purified hemoglobin in the absence of oxygen at a pH of about 7.4 to about 9.2.